

The Hub Playbook for

Construction Companies



The Hub Playbook for Construction Companies

As part of the Transforming Construction Challenge, over the past four years the Hub has worked with government and industry to create solutions that support the transformation of the sector. New tools, processes and standards will boost productivity, supporting a more innovative, safer, higher quality, more sustainable sector ready to deliver the ambitions we have for our society, environment and economy.

The Hub's programme has focused on enabling the market to succeed. We have shaped the policy and regulatory environment, helping clients and policymakers to drive added value in the decisions they take. Our outputs will enable all parts of the supply chain to respond with innovative solutions that exploit the opportunities that new digital, data-centric and manufacturing approaches can bring.

This Playbook signposts how construction companies can access the Hub's outputs, and implement and embed them into their organisation. This Playbook clearly articulates from a construction company's perspective what each of the Hub's key outputs are, the key drivers behind their development, and the practical steps to take to accelerate and drive adoption within their organisation.



Value Toolkit



Value Toolkit

What is it?

The Value Toolkit is a pioneering suite of tools that can be used to embed value-based decision making in projects across the construction and built environment sector. Value-based decision making focuses on how an investment can deliver the best outcomes and thus value, rather than focusing exclusively on delivering to the lowest possible price.

Why do it?

The government is driving the construction industry to adopt value-based decision making through policies set out in the Construction Playbook and Transforming Infrastructure Performance Roadmap to 2030.

Both the public and private sector can apply the tools within the Value Toolkit on single projects, across programmes or at an enterprise level.

Use of the Value Toolkit will drive transformational change in the way all stakeholders in the sector are able to create better schools, hospitals, homes and buildings in the future.

The Toolkit can be used to help tackle the increasingly complex challenges our society now faces, from climate change to economic recovery in a post-pandemic world.

The role of construction companies

Construction companies can use the Value Toolkit to better understand how the solution they are offering – their ‘value proposition’ – aligns to the client need. There may also be scope to work with the client as the Value Profile is developed, feeding in through early market engagement.

What practical help is available to construction companies?

The Construction Innovation Hub and partners across industry developed the Value Toolkit as a resource for the industry. To support adoption the Hub has developed an [e-learning course](#) for the supply chain on how to respond if a client is using the Value Toolkit, and e-learning for commercial teams looking to understand value-based decision making. This will be supported by overarching guidance, including an overview document and [BSI Flex standard 390](#). The Toolkit provides a webapp to store the decision points and the evidence behind them, so that these are transferred at every handover point in the lifecycle of an asset.

What are my first steps?

Construction companies can use the Value Toolkit as a resource to educate, enable, and empower their management and staff. The overarching principles are set out in a BSI Flex standard (BSI Flex 390 Built environment. Value-based decision making – Specification) and will be supported by a detailed suite of tools that integrate to support key decisions.

Contractors can use the Value Toolkit as a mechanism to showcase how their solutions create value and a mechanism for early client engagement. First steps are to do the introduction to the Value Toolkit training course.

Find out more about the Value Toolkit [here](#)

Product Platform Rulebook



Product Platform Rulebook

What is it?

Platform construction uses product platforms as standard, repeatable assets with interoperable components. Their use can reduce cost, waste, and carbon and help the infrastructure sector better deliver the future pipeline of projects and programmes.

Platform construction will drive transformational change in the way clients think about how our schools, hospitals, homes and buildings can be created in the future.

It is designed with built-in mechanisms for continuous improvement and the opportunity for synchronisation and streamlining as both capability and capacity grow.

A product platform is a kit-of-parts, associated production processes, and the knowledge, people and relationships required to deliver all or part of construction projects using a platform approach. It provides a stable core which is configured and combined with complementary components (via defined interfaces) to suit a particular project. A product platform also includes the processes, tools and equipment required for assembly.

Why do it?

The Rulebook has been created to support the implementation of the policies described in the Construction Playbook. It also enables the accelerated adoption of platform approaches described in Transforming Infrastructure Performance: Roadmap to 2030 (TIP). The needs of government, clients and industry lie at the heart of the Rulebook's development and its publication follows extensive stakeholder consultation and industry involvement. The Rulebook stands ready to be the blueprint for developing and implementing product platforms for current and future market players.

The role of construction companies

The Rulebook is an open access guide to key processes giving industry the tools they need to invest in their capability to develop product platforms and build their capacity to respond to an aggregated pipeline. In turn, clients will be enabled to specify a platform approach with confidence – secure in the knowledge that it will enhance safety, performance and quality standards.

What practical help is available to construction companies?

The Rulebook is a fundamental step forward towards creating a voluntary consensus standard that supports the construction industry, as a whole system, to develop and deploy product platforms consistently in delivering better environmental and societal outcomes through the built environment.

The Rulebook establishes the Rules and Principles for product platforms in construction and provides supporting explanations.

What are my first steps?

Construction companies can use the Rulebook as an open access resource to educate, enable, and empower their management and staff. It outlines additional guidance, case studies and definitions.

Product platform providers can use the Hub's Product Platform Maturity Assessment tool to assess the maturity of existing or developing product platforms. They can work with NRM/Uniclass/others to develop a suitable system hierarchy to inform a universal classification of building elements and they can develop a suitable classification system for interfaces.

Find out more about the Product Platform Rulebook [here](#)

Information Management



Information Management

What is it?

The Hub's Information Management project developed tools and guidance designed to support industry to adapt and thrive within an evolving digital landscape. Information management is the key to unlocking industry's potential, providing the Golden Thread that enables transformation to evolve and improve our infrastructure. The Hub's Information Management programme has developed resources to support industry adopt digital tools and processes as business as usual. In 2021 the Infrastructure and Projects Authority (IPA) launched an updated information management mandate as part of its new Transforming Infrastructure Performance: Roadmap to 2030, with detailed requirements for public sector clients to use the UK BIM Framework for the duration of the ten-year plan.

Why do it?

The government is driving the adoption of information management through policies set out in the TIP Roadmap to 2030 (Information Management Mandate) and the application of the UK BIM Framework, and through the introduction of the National Digital Twin Programme.

By applying effective information management processes, the market can benefit from greater efficiencies, improved quality and consistency, reduced costs and increased resilience and agility. Our research found that £6 of direct labour productivity gains can potentially be secured for every £1 invested in information management. Similarly, 1.6% to 18% costs savings at various stages of the asset lifecycle can potentially be secured for every £1 invested in information management.

The role of construction companies

Construction companies can work with their supply chains to develop capability and capacity in information management. Information management can lead to reductions of risk, rework and construction time – improving the efficiency of builds. In the design phase, improved visualisation and communication support collaboration between the design team and constructor so that issues can be identified early and mitigated. This is an emerging opportunity for construction companies.

What practical help is available to construction companies?

The Hub was worked in partnership with industry, government and academia to produce open-source outputs that support industry on the transformation journey. This includes resources to support your organisation's digital transformation, tools to support change, and a strong evidence base that shows the value of digital transformation.

Resources include: The UK BIM Framework – a series of guidance documents for using BIM in the UK; Digital Twin Navigator – an interactive guide for considering digital twins in business cases and capital project procurement; Energy and Carbon Framework – guidance that defines operation energy and carbon dioxide emissions information exchanges for Government Soft Landings (GSL); Local Authorities Soft Landings Navigators – an interactive navigator for implementing GSL; LEXICON – methodology for creating and managing Product Data Templates; Information Requirements Tool – to support client information managers; and a Skills and Competency Framework – guidance to support the development of information management capabilities.

What are my first steps?

The UK BIM Framework sets out the approach for implementing information management in the UK using the framework for managing information provided by the ISO 19650 series for Building Information Modelling (BIM). It includes:

- the published standards called upon to implement BIM in the UK
- the UK BIM Guidance Framework
- useful links to other resources

The UK BIM Framework will guide and support construction companies in implementing BIM. To understand the latest innovations in the construction sector, see the [knowledge base navigator](#) which has the latest research on emerging and proven technologies.

Find out more about Information Management [here](#)

**Quality
Assurance**



Quality Assurance

What is it?

The Hub's work into quality assurance provides the guidance and tools for construction product manufacturers to deliver higher quality, safer, more sustainable outputs, whether a provider of traditional products or producer of offsite, platform-based solutions. It focuses on two main areas. Quality – CPQP offers a toolbox of resources to help manufacturers produce products and components in line with best practice quality standards, ensure legal compliance and improve the efficiency of their operations. Product verification and validation offers a clear route to product validation as part of a platform-based approach to construction. This helps ensure finished products meet all requirements set out at design stage.

Why do it?

Our tools and guidelines set the level of quality assurance and risk assessment that should be embedded within both the design and production stages of product manufacturing. They will help businesses conform with new standards such as BS 99001 and ensure compliance with legislation, including the new Building Safety Act. The Construction Playbook and Transforming Infrastructure Performance Roadmap to 2030 both set out a vision for a manufacturing-led construction sector. CPQP is part of a suite of tools that the Hub has developed to meet these ambitions.

The role of construction companies

The introduction of Modern Methods of Construction and platform approaches brings about new challenges and ways of working that the industry must adapt to.

Contractors are under increasing pressure to provide evidence that satisfactory attempts to mitigate risk have been taken. This is where the Hub's Quality Assurance outputs can add real value.

What practical help is available to construction companies?

The Construction Innovation Hub and partners across industry have developed the CPQP Quality Framework process that should be followed during the creation of new construction products. It includes five phases, ranging from product definition to product launch.

A Verification & Validation Guide (VV) has been designed to help constructors efficiently and effectively navigate the verification and validation processes in line with shifting regulatory landscapes. The guide focuses on the testing of components and their integration as part of a system during the product development process. It is designed to fit within the CPQP framework.

What are my first steps?

Adopt the CPQP process for the creation of construction products, and encourage its use throughout your supply chain. The Hub has created a range of resources to support [Quality Assurance and Product Validation and Testing](#) that are available open access. CPQP directly supports the Hub's Product Platform Programme. It provides practical tools for the quality assurance of product platforms developed using the guiding rules set out in the Hub's Product Platform Rulebook.

CPQP aims to ensure that quality is built into any new manufacturing processes and final products from the start and supports the creation of a live control document for the Golden Thread.

Find out more about [Quality Assurance here](#)

The Construction Innovation Hub is funded by UK Research and Innovation through the Industrial Strategy Challenge Fund



The Construction Innovation Hub is a partnership between:



constructioninnovationhub.org.uk
#TransformingConstruction